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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,109	05/15/2001	Ronald S. Cok	82687THC	1762

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Thomas H. Close
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER

BELL, PAUL A

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 01/28/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/858,109

Applicant(s)

COK, RONALD S.

Examiner

PAUL A BELL

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen et al. (6,414,661) in view of Hunter (6,441,560) and Yano et al. (6,317,138).

With regard to claim 1 Shen et al. teaches an active matrix OLED flat-panel color display (column 1, lines 10-49), comprising: a) a plurality of light emitting elements and associated control circuits (figure 2, items 10 and 14); b) a programmable power supply connected to the control circuits (figure 2 and 3); c) a sensor for sensing the light to produce a feedback signal (figure 4a and column 9, lines 10-47); and d) a display controller responsive to the respective feedback signal for programming the programmable power supply to compensate for changes in the light output from the light emitting elements (figure 4a, item 30).

Shen et al. does not teach, “plurality of light emitting elements for emitting light of **different** colors” and a **separate** sensor for sensing **each color** of light emitted by the display to produce a feedback signal for each color”. Shen instead illustrates all the light emitting elements

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having only one color and one common sensor which is moved to look at each light emitting element.

Hunter teaches the concept of having “a separate sensor for each light emitting element” also used for control (See Hunter figure 3, items 45 and 20, column 5, lines 52-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Shen et al. apparatus to have a separate sensor for each light emitting element mounted on a common substrate as taught by Hunter because one would be motivated to replace a moving single sensor with stationary multiple sensors to speed up and facilitate real-time calibration and control.

Yano et al. Teaches the concept of having, “plurality of light emitting elements for emitting light of **different** colors” (See Yano et al. Figures 2a, and 2b column 3, lines 30-34 and column 4, lines 27-31) is well known in the prior art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Shen et al. apparatus as modified by Hunter to have “plurality of light emitting elements for emitting light of **different** colors”, as taught by Yano et al. because one would be motivated to produce a multi color display over a single color display in order to display more than one color in a multi color display also multi color displays are more commercially marketable.

With regard to claim 3 Shen et al. as modified by Hunter and Yano et al. teaches further comprising separate programmable power supplies for each color in the flat-panel display (Shen

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et al. teaches a separate power line for each LED which are provided by a provided by a separate power supplies it reads on this broad language)

With regard to claim 8 Shen et al. as modified by Hunter and Yano et al. teaches the display claimed in claim 1, wherein the programmable power supply is addressable as a storage element (It is inherent that which can be programmed has storage or it could not be programmed).

With regard to claim 9 since Shen et al. as modified by Hunter and Yano et al. was found to suggest the apparatus claim 1 above and therefore the corresponding method claim 9 would be obvious.

With regard to claim 11 Shen et al. as modified by Hunter and Yano et al. teaches the method claimed in claim 9, wherein the display includes a controller having a lookup table for receiving device independent code values and producing device dependent code values and further comprising the step of calibrating the controller by changing the lookup table (See Shen et al. figure 7 and 8 and it is inherent that when every pixel is calibrated as taught by Shen et al. that the calibrated values are stored in a table as broadly claimed).

With regard to claim 12 Shen et al. as modified by Hunter and Yano et al was shown in 11 above to cover most of these limitations in addition he is now claiming, "changing the lookup table to correct for the color balance of the display" (It is inherent that when each led is calibrated that the color balance is corrected).

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With regard to claims 4 or 5 Shen et al. as modified by Hunter and Yano et al. does not teach the display claimed in claim 1, wherein the programmable power supply is on a common substrate with the display as in 4 or wherein the programmable power supply is on a separate substrate from the display as in 5.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to locate the power supply on either the display substrate or a separate substrate because the mere “shift in location of a part”, such as the location of the power supply can not be used to distinguish over the prior art without a showing of “unexpected results”. (In re Japikse 86 USPQ 70 ccpa 1950). A motivation for placing a power supply on a separate substrate would be to reduce weight and size of a separate display. A motivation for putting a power supply on the display substrate would be to reduce power loss due to not having long wires delivering the power.

With regard to claims 6 and 7, Shen et al. as modified by Hunter and Yano et al. does not teach the display claimed in claim 1, wherein the programmable power supply is in a common package with the display or wherein the programmable power supply is in a separate package from the display.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to locate the power supply in either a common package with the display or in a separate package from the display because the mere “shift in location of a part”, such as the location of the power supply can not be used to distinguish over the prior art without a

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showing of “unexpected results” (In re Japikse 86 USPQ 70 ccpa 1950). A motivation for putting a power supply in a separate package would be to reduce weight and size of the display on desk. A motivation for placing a power supply in a common package with display would be to reduce power loss due to not having long wires delivering the power.

Response to Arguments

3. Applicant's arguments filed 28 October 2003 have been fully considered but they are not persuasive.

The applicant argues on page 5 with regard to claim 1, “Shen et al. do not teach emitting light of different colors and a separate sensor for sensing each color as claimed by applicants does not disclose”. The examiner agrees with this statement and that is why examiner made this same statement in last office action and further that is why examiner used in last office action secondary references Hunter and Yano et al. to make changes to the primary reference Shen et al.

The applicant argues on page 5 with regard to claim 1, “Hunter does not discuss a color display device nor does he show a programmable power supply for driving the display”. The examiner agrees with this statement but fails to see the relevance since Hunter which is a secondary reference from the analogous display art is being only used to teach the concept of, “ a separate sensor for each light emitting element”, to modify the primary reference Shen et al.

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The applicant argues on page 5 with regard to claim 1, “Yano et al. do not disclose correcting different colors in the display elements separately using a separate sensor for each color as disclosed and claimed by applicant”. The examiner agrees with this statement but fails to see the relevance since Yano et al. which is a secondary reference from the analogous display art is being only used to teach the concept of, “ plurality of light emitting elements for emitting light of different colors” to further modify the primary reference Shen et al which has been modified by Hunter. In further response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “correcting different colors in the display elements”) are not recited in the rejected claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The applicant argues on page 6 with regard to claim 1, “Hunter teaches a separate sensor in the active matrix circuit of each pixel, but doesn’t teach sending a feedback signal from the sensor to a programmable power supply that is external of the active matrix pixel circuits”. The examiner agrees with this statement but fails to see the relevance since Hunter which is a secondary reference from the analogous display art is being only used to teach the concept of, “ a separate sensor for each light emitting element”, to modify the primary reference Shen et al which shows the feedback concept.

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The applicant argues on page 6 with regard to claim 1, "Yano et al. do not teach, show, or suggest individually correcting the differently colored light emitters in the display element. The examiner agrees with this statement but fails to see the relevance since Yano et al. which is a secondary reference from the analogous display art is being only used to teach the concept of, "plurality of light emitting elements for emitting light of different colors" to further modify the primary reference Shen et al which has been modified by Hunter.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: (703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Paul Bell

Paul Bell
Art unit 2675
13 January 2004

Chan Nguyen
CHANH NGUYEN
PRIMARY EXAMINER